BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
DATE OF CONFERENCES: August 14, 2014
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Sheila Charles
Jill Edelmann
Tom Jameson
Bob Juliano
Steve Liakos
Nancy Mayville
Christine Perron
C.R. Willeke

Federal Highway Administration
Jamie Sikora

NHDHR
Laura Black

CMA
Stephen Kjellander
Daniel Hudson

Hoyle Tanner
Josif Bicja
Aaron Lachance
Matthew Low

Stantec
Gerard Fortin
Michael Leach

City of Lebanon
Christina Hall

Preservation Company
Lynne Monroe

Town of Henniker
Tom Yennerell

Lyme Heritage Commission
Tim Cook

Town of Milford
Rick Riendeau

Town of Stratham
Lincoln Daley
Paul Deschaine

PROJECTS/PRESENTATIONS REVIEWED THIS MONTH:
(minutes on subsequent pages)
(When viewing these minutes online, click on a project to zoom to the minutes for that project)

August 14, 2014

Milford 29509 (no federal number)
Participants: Matthew Low, Josef Bicja, Hoyle Tanner; Rick Riendeau, Town of Milford; Nancy Mayville, Steve Liakos, NHDOT

Initial consultation regarding the structurally deficient Jones Crossing Bridge (062/138) over the Souhegan River, a High Pratt Truss built in 1910, and necessary temporary stabilization efforts.

J. Bicja provided an overview of the project through a PowerPoint presentation. He noted that the existing bridge is a High Pratt Truss built in 1910 by Canton Bridge Company of Canton Ohio. The current bridge replaced a wooden double barrel covered bridge that was lost to arson. The structure was designed by John Storrs and is eligible for listing in the National Register of Historic Places under Criterion C for its engineering significance according to a Determination of Eligibility document prepared by Richard Casella of Historic Documentation Company. Extensive repairs were completed in 1956. Minor repairs were completed in 1973. The bridge was bypassed in 1992 and has been used a pedestrian bridge ever since until July 11, 2014, when it was closed to all traffic due to its critical

deficiency status. NHDOT inspection personnel inspected the bridge in mid-June and concluded that the bridge has no remaining safe calculated live load capacity and is considered to be unsafe for any/all loading. The Town closed the bridge shortly after it received the Critical Deficiency letter from NHDOT.

Jones Crossing Bridge has a span length of 150' and each truss is made up of 8 panels each measuring 18'-9" long. The bridge sits on mortared stone abutments and has an out-to-out width of 16'-8". The top chords and end diagonals are riveted box sections consisting of two channels joined back-to-back with continuous top plates and bottom tie plates. Bottom chords and truss web members are built-up members consisting of angles joined back-to-back with tie plates. Portal bracing consists of a lattice truss strut with T-sections. Sway frames struts and cross bracing are constructed with angles. The flooring consists of floor beams at each panel point. There are six lines of interior I-beam stringers and two lines of exterior channel stringers spaced at 2'-6" that support a metal pan deck filled with bituminous pavement.

Phase A of the project includes the stabilization of the Jones Crossing Bridge and Phase B will consist of demolition, rehabilitation or removal for adaptive reuse of the bridge.

Phase A of the project proposes to stabilize the bridge by the following procedure:

1. Construct a temporary access way on the northeast quadrant of the project to complete the in-river work.
2. Install temporary support bents supported on precast concrete footings in the channel bottom to support the existing bridge superstructure.
3. Jack the bridge to release the stresses and unload it.
4. Remove existing bridge rail (which dates to 1992) and install supplement bottom chords and gusset plates.
5. Release the jacking pressure to engage the supplemental bottom chord.
6. Remove existing bridge bituminous pavement and metal pan deck.
7. Remove temporary support bents and restore all disturbed areas to pre-construction conditions.

The schedule for Phase A of the project is as follows:

- Advertise Project – August 15th
- Pre-Bid Meeting – August 19th
- Open Bids – August 26th
- Issue Notice to Proceed – September 1st
- Shore Bridge No Later than September 22nd
- Complete Project – Late October

After the stabilization is complete the next phase of the project would be to investigate three alternatives that will be presented in an abbreviated Engineering Study as follows:

1) Rehabilitation and Reuse in Existing Location
2) Relocation for Rehabilitation and Reuse in Different Location
3) Removal and Recycling of the Existing Bridge

M. Low stated that he anticipates attending the October NHDOT Cultural Resources Meeting to discuss the progress of work and some of the findings of the abbreviated Engineering Study.

With regard to Edna Feighner's review of the potential archaeological impacts, L. Black asked S. Charles to check the RPR form with regard to possible disturbance to the northeast quadrant to construct the access way. S. Charles checked the RPR form, which stated there are "no archaeology issues" (although access disturbances were not included in the initial submission). While there may be ground disturbance activities within previously disturbed areas in the vicinity of the bridge on each approach as required to install temporary shoring to support the existing superstructure, S. Charles was concerned there may be additional impacts outside of these areas, including for the proposed access road. L. Black indicated that Edna Feighner of NHDHR should recheck the proposed area of ground disturbance. J. Bicja gave a full set of plans to L. Black. E. Feighner is out this week but will check the plans early next week. M. Low stated that time is of essence and it would be great if E. Feighner relays her review comments to Hoyle, Tanner early next week as a pre-bid meeting is scheduled for Tuesday, August 19, 2014.

J. Bicja stated that based on his limited field observations the existing substructure is stable and there are no signs of settlement or distress. S. Liakos said that statement addresses his concern whether the south abutment is stable to support the NH Route 101 embankment.

M. Low stated that no public outreach has been yet done for the project. Public outreach letters will be sent to local interest groups such as Historical Societies, Recreational Trail Groups, etc. during Phase B of the project.

No additional concerns were raised about the project as proposed. L. Black commented that she does not have objections with the proposed work.

Follow up: E. Feighner checked the maps on Monday, August 18, 2014 and indicated "the access road situation and all areas around the bridge are archaeologically sensitive," especially the north quadrants. E. Feighner initially recommended a survey, however due to the danger of bridge collapse, E. Feighner approved the laying geotextile and fill, and use of an archaeologist when removing the materials.

Lebanon 13558A, X-A000(235)
Participants: Matthew Low, Aaron Lachance, Hoyle Tanner; Christina Hall, City of Lebanon; Bob Juliano, Steve Liakos, CR Willeke, NHDOT

Continued consultation to present the temporary/emergency bridge rail repair design and gain committee input for the NH Route 12A bridge (062/117) over the railroad.

The project was presented to the Committee to update them on the current status of the bridge replacement project, but primarily to address the condition of the bridge rail which is failing and needs to be addressed to alleviate safety concerns.

M. Low presented a PowerPoint slideshow which highlighted the background of the project, the status of the bridge replacement project development and the proposal to address the condition of the bridge rail. The project to replace the bridge was presented at previous meetings in 2003 and 2011. The focus of those presentations was to evaluate potential effects related to the replacement of the bridge and realignment of NH Route 12A. The development of the replacement project has been put on hold since 2012 due to the estimated cost of the project ($9M +/-) exceeding available budgets.

The bridge, which was constructed in 1949 is deteriorating. Of specific concern is the condition of the brush curb and bridge rail on the south side of the bridge and bridge rail on the north/sidewalk side of the bridge.

Several studies were conducted in previous years including an Individual Inventory Form on the bridge, several nearby residences, a Route 12A (South Main Street) Historic Area Form and an archaeological Phase 1A investigation. With the exception of the bridge, the other inventoried parcels were determined not individually eligible for the National Register and the Route 12A Historic Area form concluded the area did not contain sufficient integrity to be National Register eligible. L. Black did not have information of the result of the Determination of Eligibility (DOE) for the bridge, but would research DHR files to find the determination.

The proposal to address the rail includes complete removal of the brush curb and bridge rail on the south side and installation of a steel H-pile rail system from endpost to endpost. On the sidewalk side, the proposal is to add supplementary tube-steel rails connected to the existing posts from endpost to endpost. M. Low stressed that the scope of the rail repair work was isolated to the bridge structure and would not extend off the bridge.

The Committee agreed that a new Effect Memo would be required for the temporary rail repair, assuming the DOE on the bridge was that the bridge was not eligible. A new NHDOT project number (13558B) will be opened for the temporary rail repair.

Steve Liakos (NHDOT Bridge Engineer) asked that Hoyle, Tanner evaluate the shear capacity of the existing deck overhang with the temporary rail prior to submitting preliminary plans to NHDOT for review. M. Low said that Hoyle, Tanner would make sure this was addressed.

Followup: L. Black reviewed NHDHR files and noted that the individual inventory form for the bridge had not been reviewed by the DOE committee.

Lyme-Thetford 14460, X-A000(394)
Participants: Gerard Fortin, Michael Leach, Stantec; Bob Juliano, Christine Perron, NHDOT; Consulting Party: Tim Cook, Lyme Heritage Commission (call-in)

Initial consultation on the Lyme-Thetford bridge project (0 53/112) over the Connecticut River constructed in 1937 between Lyme, NH and Thetford VT.

Tim Cook of the Lyme Heritage Commission had requested to be a consulting party to the project following the public informational meeting held in Lyme, NH on July 23, 2014 and was joining the discussion via conference call. Jamie Sikora of Federal Highway Administration noted and accepted the request and confirmed consulting party status to Mr. Cook on August 11, 2014.

Mike Leach began with the power point presentation of the project beginning with the bridge information being a Parker Truss Bridge built in 1937, which is likely to be deemed eligible for listing in the National Register; bridge consists of two 230' spans; roadway width at bridge is 21' curb to curb; bridge is on the NHDOT States' Red List; 2014 Bridge Priority Number #63; and currently posted for 15 ton load and single lane traffic. An aerial view of the location and close up photographs of the existing dwellings along with the approximate Area of Potential Effect (APE) of the project

were then shown. Following those photographs was summary for the tasks completed to date, which included the on-site initial meeting with NHDHR, NHDOT-BOE, and VTrans in August 2013; in-depth structural inspection September-October 2013; underwater pier inspection August 2013; pier concrete sampling and testing in October 2013; Load Rating analysis January to May 2014 and Public Information Meeting in Lyme on July 23, 2014. This was followed by photographs of the deterioration from the bridge inspections including steel bridge rail and curb, stringers, Vermont abutment, and pier above and below water.

The anticipated rehabilitation effort was introduced and included: replacement of the floor beams and stringers; replacement of the concrete deck and curb; replacement of the bridge rails; paint all steel truss components; repair abutments; repair or replace pier. The Rehabilitation Alternatives for the pier were introduced: encapsulate the pier stem with new concrete; rebuild the pier in kind; construct new two column drilled shaft pier.

The Rehabilitation Summary was presented that noted: the project would rehabilitate the bridge to carry legal loads without changing its geometry; minor approach roadway work; two construction seasons anticipated; first season to complete structural repairs; second season to paint the steel truss components; the bridge would need to be closed during construction; estimated construction cost $4.5m. A graphic of the alternate routes north and south was shown.

This was followed by the Next Steps for the project: Present to Cultural and Natural Resources to get input; Develop and Evaluate Alternates; Review constructability and access to the site; Public information meeting in Thetford, VT; Complete NEPA process and continue Section 106 process in both states; Develop preliminary plans; Conduct interim repairs By NH Bridge Maintenance in Fall 2014 to remove alternating one-way traffic.

The next step for Cultural Resources was introduced noting: Need to investigate if additional resources exist in the Project area; Need to prepare individual inventory form for character defining features of the bridge; Need to determine if a NH individual Property Inventory form for the NE quadrant is needed; Need to determine if Individual Property Inventory forms for Vermont properties are needed, which ended the power point presentation and opened up the meeting for questions.

Laura Black noted that a Determination of Eligibility had not been made on the bridge. She summarized two options that had been previously discussed. The group could agree that an individual inventory form could be completed for the bridge if this form would provide enough detail on character defining features. Or, if the inventory form would not provide enough detail, then the inventory form could be skipped, the bridge could be determined eligible by consensus, and a Historic Structures Report could be completed instead of the inventory form.

L. Black asked if it was known what specific components would be replaced such as the rails or stringers. Bob Juliano stated that the concrete bridge deck, steel curb and rail, and exterior stringers are in need of replacement. Some of the floor beams may also need to be replaced, but the full scope of work has not yet been determined. L. Black suggested that Lynne Monroe complete the detailed inventory form for the bridge noting all of the character defining details and features. L. Monroe commented that the historical survey of Parker Trusses provides details on typical character defining features, so including these details in the inventory form for this bridge would not be a problem. It was noted that the deck, rail and curb were in need of replacement. L. Black noted that changes to the character features of the bridge would be an adverse effect.

The bridge rail was discussed and it was noted that the rail was the original rail, but was not a decorative rail. B. Juliano indicated that the replacement rail would likely be our steel tube rail which is a crash tested rail. It was suggested that a replacement rail that has similar character to the original rail would not be an adverse effect but the new rail that is not in keeping with the character of the bridge would be an adverse effect. J. Sikora noted that if the project resulted in an adverse effect, it would qualify as a Programmatic Section 4(f).

It was noted that the steel curb would be replaced with concrete curb. B. Juliano noted that steel curb leaks and is the likely cause for the damage to the stringers. The concrete curb would be dimensionally similar to the existing curb. As this feature is also likely a character-defining feature, replacement in a new material may constitute an adverse effect.

Stantec will develop details for the elements to be replaced. It was noted that the goal should be to have a look similar to the existing bridge for the replacement rail and curb.

Stantec will coordinate with Vermont VTrans - cultural resource staff, who could not be present today. M. Leach noted he would coordinate on the additional individual surveys on the Vermont side for the project and schedule to have all surveys done together.

The red house in the northeast quadrant was noted as a toll house at the bridge at the Public Information Meeting and the homeowner was present. The homeowner was concerned about impacts to her house, and indicated support for the rehabilitation alternative. L. Black noted that an individual inventory is recommended at this location given the proximity to the project. M. Leach noted that archaeology was noted as not being a concern in the RPR form since the work is intended to be within the previously disturbed areas. M. Leach noted there was an archaeological site on the Toll House property. Sheila Charles noted that the records show there was an encampment on the site in the location of the garden area. The archaeology work was conducted in 1951 but no further work has occurred. S. Charles noted that as long as the work remains in the roadway footprint as noted then there are no concerns. If work is proposed (such as access to the river during construction, staging, etc.) affecting the Toll House property or other adjacent properties, there may need to be further investigation.

M. Leach noted that there was a public boat access up river about 3 miles on the Vermont side to access the river. This location would require further investigation to use. Christine Perron commented that the viability of using this boat access should be determined soon. If it could not be used, and access down the riverbank would be necessary, then an archaeological survey would be needed, which should be undertaken as early in the project schedule as possible.

The pier repair/replacement was discussed next with the three options shown on the screen. The first option was to encapsulate the existing pier. B. Juliano stated that the concrete testing revealed the cracking to the pier is due to alkali silica reactivity, (ASR) and that the encapsulating the pier would not provide the same design life as the other options and is not recommended.

The second option was to replace the pier in kind. The original pier was constructed in 1937 prior to the dams being constructed downstream in 1950. The dam construction raised the water level in the river by ten feet and the current depth at the pier is 15 to 17 feet making for very difficult construction. It should be explored if the water levels could be controlled by the dam during construction for specific

periods of time. M. Leach noted that the original plans implied the ledge is shallow in this the location making it difficult for placing sheet piling for a cofferdam. Cofferdams would be difficult to construct and this would be the most expensive option for construction.

The third option was drilled shaft piers. L. Black asked what the pier would look like. M. Leach presented a sample photograph of a drilled shaft pier constructed for a railroad bridge in Vermont. J. Edelmann noted the existing pier has a utilitarian look and is not decorative. L. Black noted that the look of a different pier may have an adverse effect.

J. Edelmann asked Tim Cook if he had any questions, and none were voiced.

To summarize:

1) There are 3 major potential changes that might result in adverse effect associated with A) pier B) railing C) steel curbing.
2) Detailed NH Individual Inventory forms need to be completed for the bridge; and the NE quad property
3) Coordinate with VT to determine inventory needs and complete as instructed
4) An archaeological study may be necessary if project work goes outside of footprint of impacted area. Determine access points.
5) Continue to explore replacement element options (noted in #1) that are sensitive to the original design of the bridge elements.
6) Based on results of inventory, assess if any other areas of project work would impact character defining elements and explore options as noted in #5.

This project will continue to coordinate with agencies and consulting parties as information is compiled and options are explored.

Stratham 27771, X-A003(622)
Participants: Daniel Hudson, Stephan Kjellander; CMA Engineers; Paul Deschaine and Lincoln Daley, Town of Stratham; Lynne Monroe, Preservation Company

Continued coordination for this Transportation Enhancement project, which proposes to construct curbing, sidewalks, crosswalks, bike lanes, bicycle racks, drainage, signage, decorative lighting, a bus shelter, landscaping, and additional enhancements within the Town Center on Portsmouth Avenue (Route 33) and Winnicutt Road.

D. Hudson provided an overview of the project which includes sidewalk, and streetscape improvements on Portsmouth Avenue extending from the traffic circle to approximately 500 feet north of Winnicutt Road and on Winnicutt Road between Portsmouth Avenue and Tansy Avenue. The primary objectives of the project are traffic calming, improved pedestrian accommodation, and creation of a Town Center, which will be accomplished through streetscape enhancements (curbing, sidewalk, trees, and lighting). The master plan has been advanced to preliminary design, but some elements may need to be deleted due to project funding constraints.

Existing conditions photos and roll plans showing planned improvements were reviewed. D. Hudson explained that the proposed Portsmouth Avenue roadway typical section includes two 11-foot travel

lanes, 5-foot bike lanes (shoulders), and 11-foot turning lanes at the intersection of Portsmouth Avenue and Winnicutt Road; reconfiguring the existing 32-43 foot paved width. .

As previously requested, Preservation Company completed a Project Area Form, which was reviewed by the DOE Committee, who concurred with Preservation Company's findings and recommendations. The project area does not include an eligible Historic District. Seven properties are potentially individually eligible. The Wiggin Memorial Library is already NR listed.

Impacts to abutting potentially historic properties were reviewed and include;

- 148 Portsmouth Avenue – Temporary slope impacts from construction of new rain garden and sidewalk with back curb.
- 149 Portsmouth Avenue – Temporary slope impacts to match to proposed curb.
- 151 Portsmouth Avenue – Permanent drainage easement to install and maintain a catch basin that will replace an existing catch basin in the same location. Temporary easement to replace existing curbed island.
- 152 Portsmouth Avenue – Temporary easement for drive match and slope work.
- 154 Portsmouth Avenue – Permanent easement to install and maintain a new drop inlet to capture stormwater in a low area. Temporary easement for slope impacts. Large tree to be trimmed or removed, as it's dying and the overhanging branches conflict with the proposed sidewalk.
- 156 Portsmouth Avenue – Temporary easement for drive match and slope work.
- 4 Winnicutt Road – Two new walkways connecting the proposed sidewalk to the path around the NR listed Wiggin Memorial Library, slope impacts, and the relocation of a sign and signal guy pole.
- 9 Winnicutt Road – Permanent easement for sidewalk with back curb. Temporary easement for slope impacts.

Questions/Comments:
J. Sikora noted that the proposed trees in front of the Historic Library could be a sight distance issue for turning traffic from Winnicutt Road. The trees will be removed from the plans.

T. Jameson recommended that conduit be installed at the Winnicutt Road intersection to support future signalization. Conduit will be added where work is proposed.
J. Sikora asked if easements were necessary at the Historic Library. Easements are not necessary given its location on Town property.
T. Jameson asked if a permanent easement would be required on the 9 Winnicutt Road property for the sidewalk. There is an angle point in the existing Winnicutt Road right-of-way, requiring a permanent easement to encompass the sidewalk.
J. Sikora asked if there would be any permanent easements on any of the potential historic properties. There will be, but only for installation and future maintenance of drainage basins and pipes. Only the 2' square drainage grates will show on project completion, so visual impacts will be minor.
L. Monroe explained that the project area has always had a transportation focus, so the creation of a Town Center is new, it is not a recreation of a former Town Center. P. Deschaine explained that NH Route 33 used to be NH 101 before the new highway was built. When Route 101 was rerouted, the roadway was not reduced in scale. The Town wishes to change the focus to an area that encourages walking and economic activity, rather than the major crossroads it has become.
L. Black asked L. Monroe what types of design elements would align with the area's history? L. Monroe explained that this was historically a rural area including elm trees and nice lawns. There

were not sidewalks historically. Preference for trees that will grow large (like elms) was noted vs. smaller fruit trees (Jill Edelmann and L. Black noted during the meeting that fruit trees probably would be more appropriate in the agricultural areas of town, but not within this area). T. Jameson recommended that the trees be limited as the root systems have the ability to ruin sidewalk and they can create sight distance and safety issues. L. Monroe noted that the trees are the major streetscape objects on this project and preference is for elms.

L. Black recommended keeping impacts off of potentially eligible properties. If a private property owner wants to construct a retaining wall that action would be outside of regulatory jurisdiction under Section 106 [see See 36 CFR 800.9 (c) regarding federal agency responsibility related to intentional adverse effects by applicants]. If it's done as a part of this project (a potentially adverse effect) then an Individual Inventory Form would need to be completed and a variety of potential impacts evaluated.

P. Deschaine explained that there is an extremely tight budget and project timeline. Additional studies, if requested, may require that the project be scaled back in those areas to avoid any impacts, which isn't in the best interest of the community. L. Black stated that if there are impacts to the potentially historic properties that it is the applicant's responsibility to inform the federal and state agencies of them, as required by law. L. Daley asked if temporary slope impacts on those properties are ok? They are if they don't substantively alter the property.

J. Edelmann noted that in her opinion, the property at 9 Winnicutt Road would not be negatively impacted by the proposed sidewalk and back curb, but a retaining wall would be different. As presented, the project qualifies for a No Adverse Effect with de minimis 4(f) impacts finding. If there are substantive changes to any proposed features, additional coordination is necessary.
J. Edelmann suggested that a No Adverse Effect memo be submitted for approval, but that coordination continue with L. Monroe and the Stratham Heritage Commission about work proposed at the Wiggin Memorial Library and 9 Winnicutt Road. The project's cultural resources consultant, Preservation Company, can assist the applicant in determining if any project changes rise to a level of impacts beyond those already discussed which would indicate whether further consultation with the agencies regarding project design and effect is necessary.

Submitted by: Sheila Charles and Jill Edelmann, Cultural Resources